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# Pesticide Safety 2007 - Groundwater Protection Regulations (Zone II) 2007

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# Groundwater Protection Regulations (Zone II)

Brian Wick  
Cape Cod Cranberry Growers' Association



# Groundwater Protection Regulations

Intended to prevent contamination of public drinking water supply wells through regulating the application of pesticide products on the Groundwater Protection List within primary recharge areas.





# Definition: Primary Recharge Area

- Interim Wellhead Protection Area (IWPA)
- Zone II
- Primary Recharge Areas are updated yearly by the state
- Regulations ONLY apply to public drinking water wells that pump greater than 100,000 gallons of water per day.





# Are You Subject to the Regulations?

Step 1: Determine if your cranberry bog is  
in a Zone II area





# Wellhead Protection List 2007

## Cranberry Growing Region:

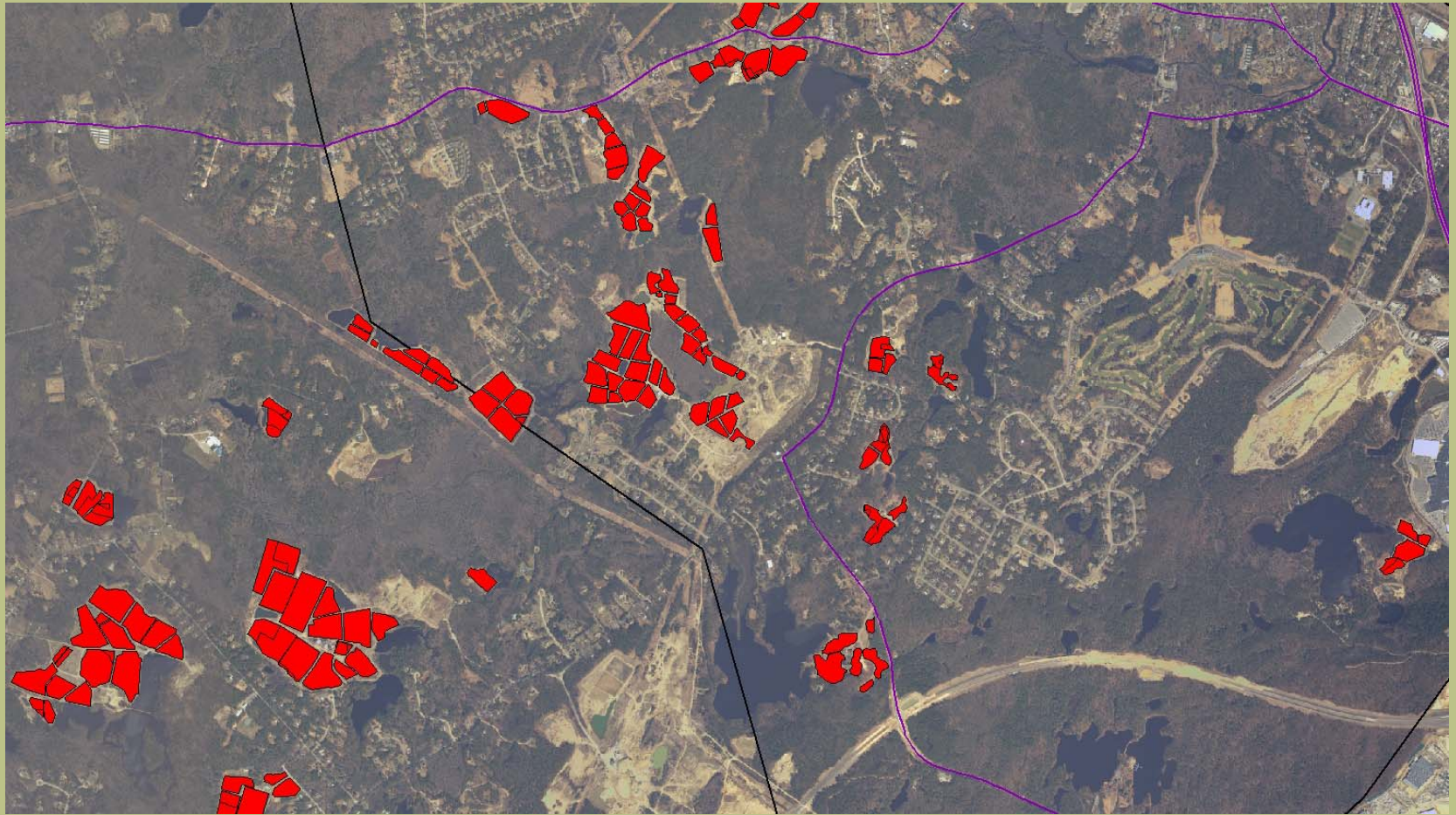
Nearly all cranberry towns contain Zone II areas within their boundaries.







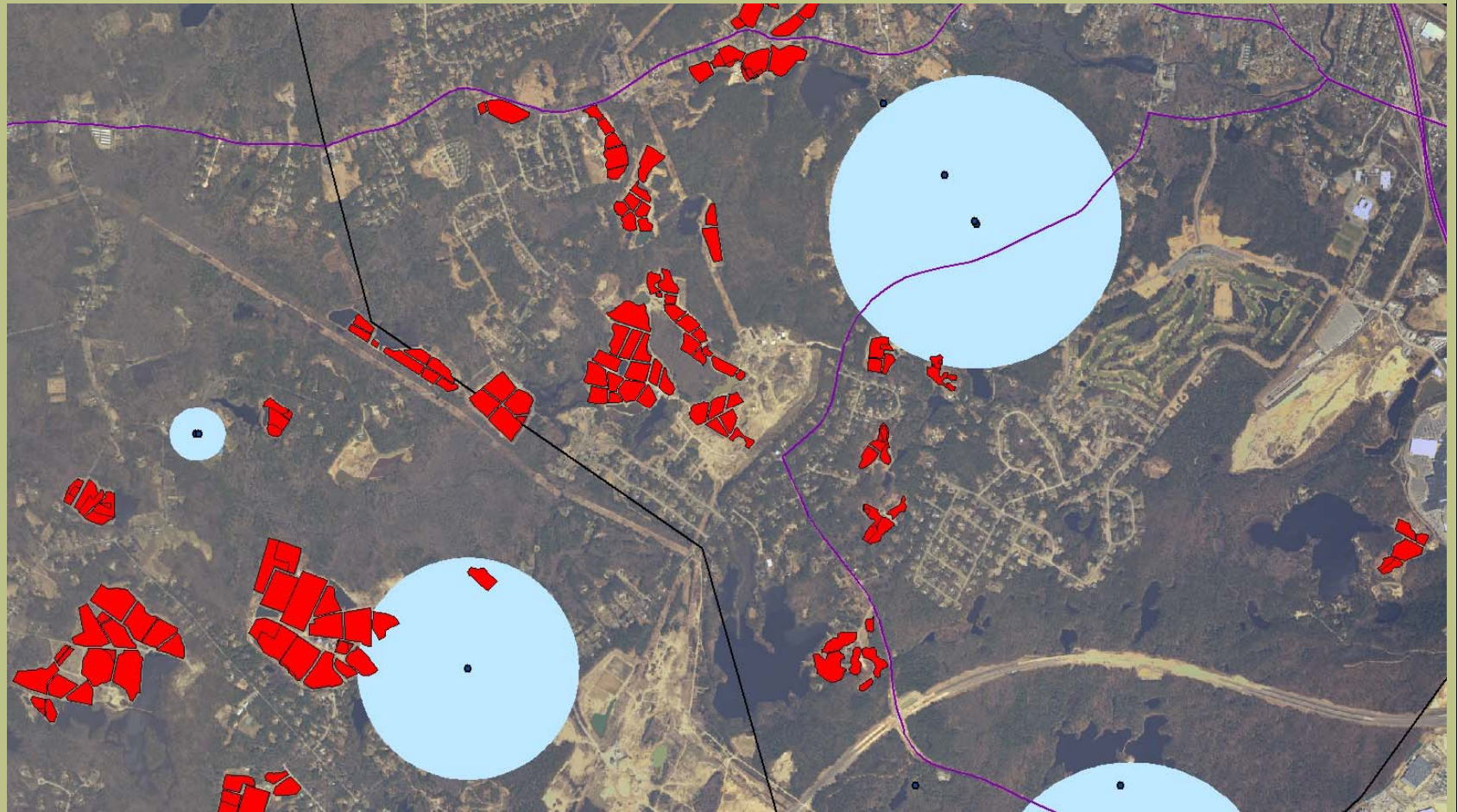
# Cranberry Bogs







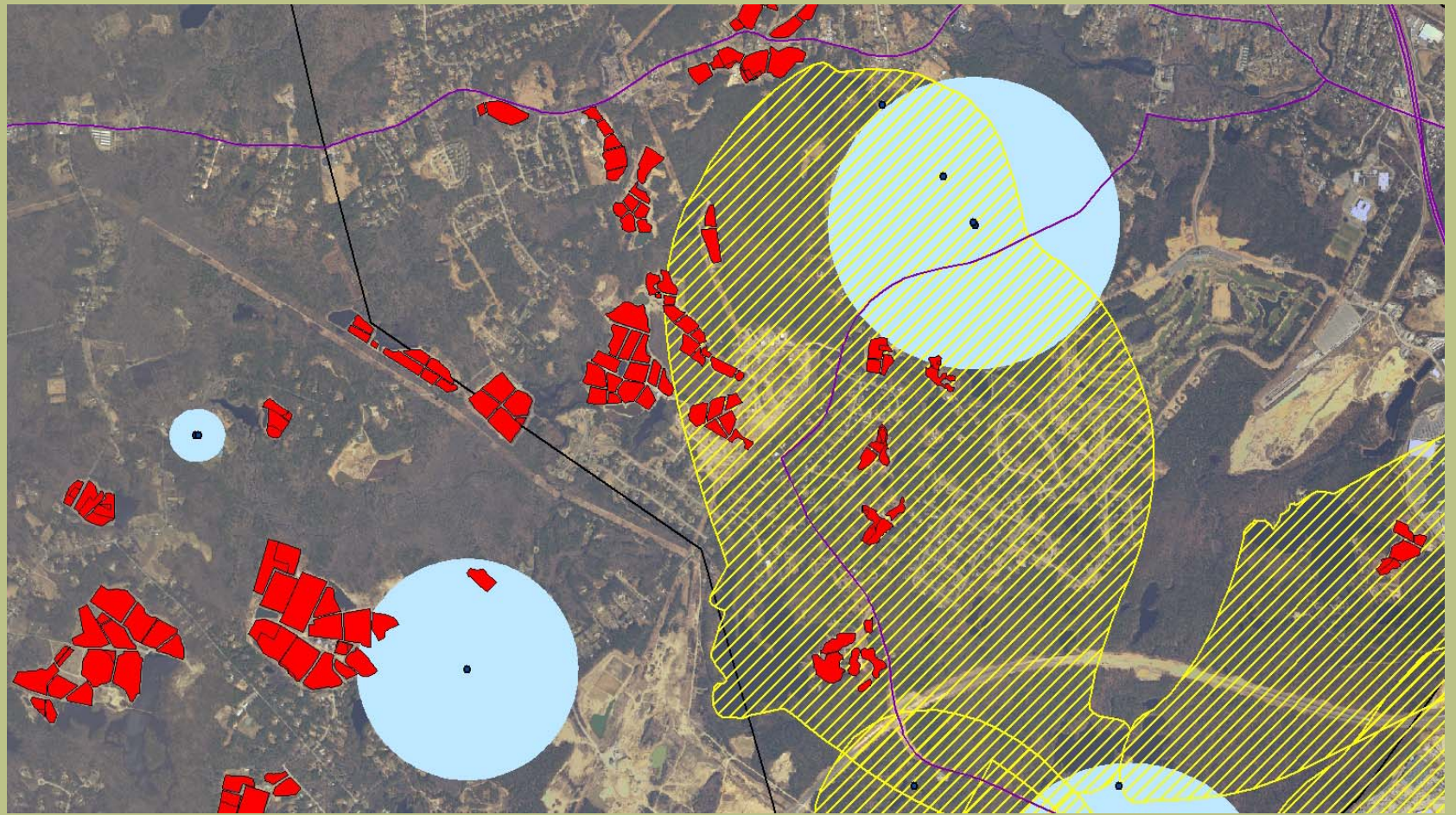
# Bogs With IWPA







# Bogs With IWPA & Zone II





# Are You in a Zone II?

CCCGA Maps Available at:

- CCCGA Office
- [www.cranberries.org](http://www.cranberries.org)
- UMass Cranberry Station
- DeCran Ag Supplies Inc.
- R.A.S.P. Inc.
- R.F. Morse & Son Inc.





# Other Resources for Maps

- PCCD/NRCS West Wareham Office
- DEP Title V maps (Board of Health)
- MDAR Web Site  
([www.mass.gov/agr/pesticides/water](http://www.mass.gov/agr/pesticides/water))
- MassGIS Web Site  
([www.mass.gov/mgis/mapping.htm](http://www.mass.gov/mgis/mapping.htm))
- DEP/SERO







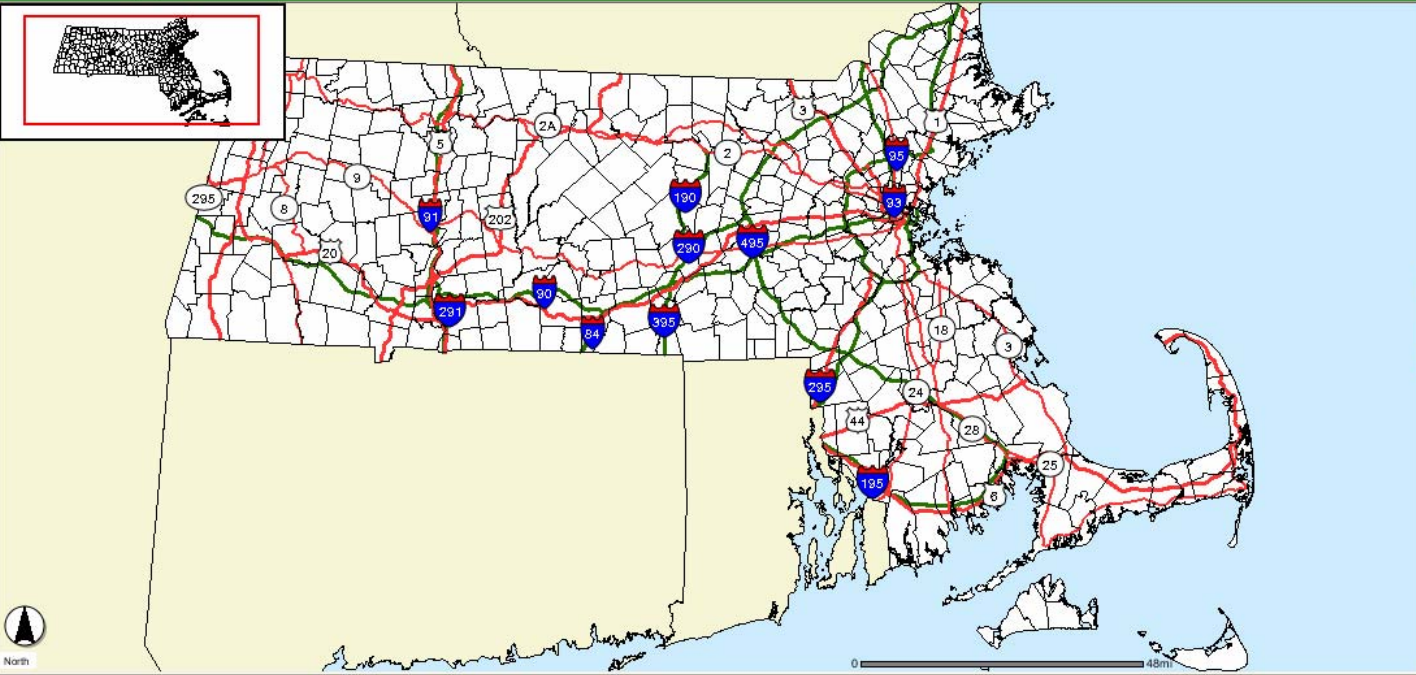
# MassGIS Online Mapping Tool

Water Supply Protection Areas - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://maps.massgis.state.ma.us/WSPA/viewer.htm> Go

**Water Supply Protection Areas** [DEP Drinking Water Program](#) [Legend](#)



Choose a Town

**Tools to Use with the Map**

- Return home (Base Map)
- Click on an icon below, then perform action with mouse on map. Red square indicates active tool.
- Click the map or draw a box to zoom in
- Click the map or draw a box to zoom out
- Drag the map to pan
- Click on the map to get latitude and longitude
- Next icons: action happens when icon is clicked.
- Clear the address marker
- Find an address. Enter into

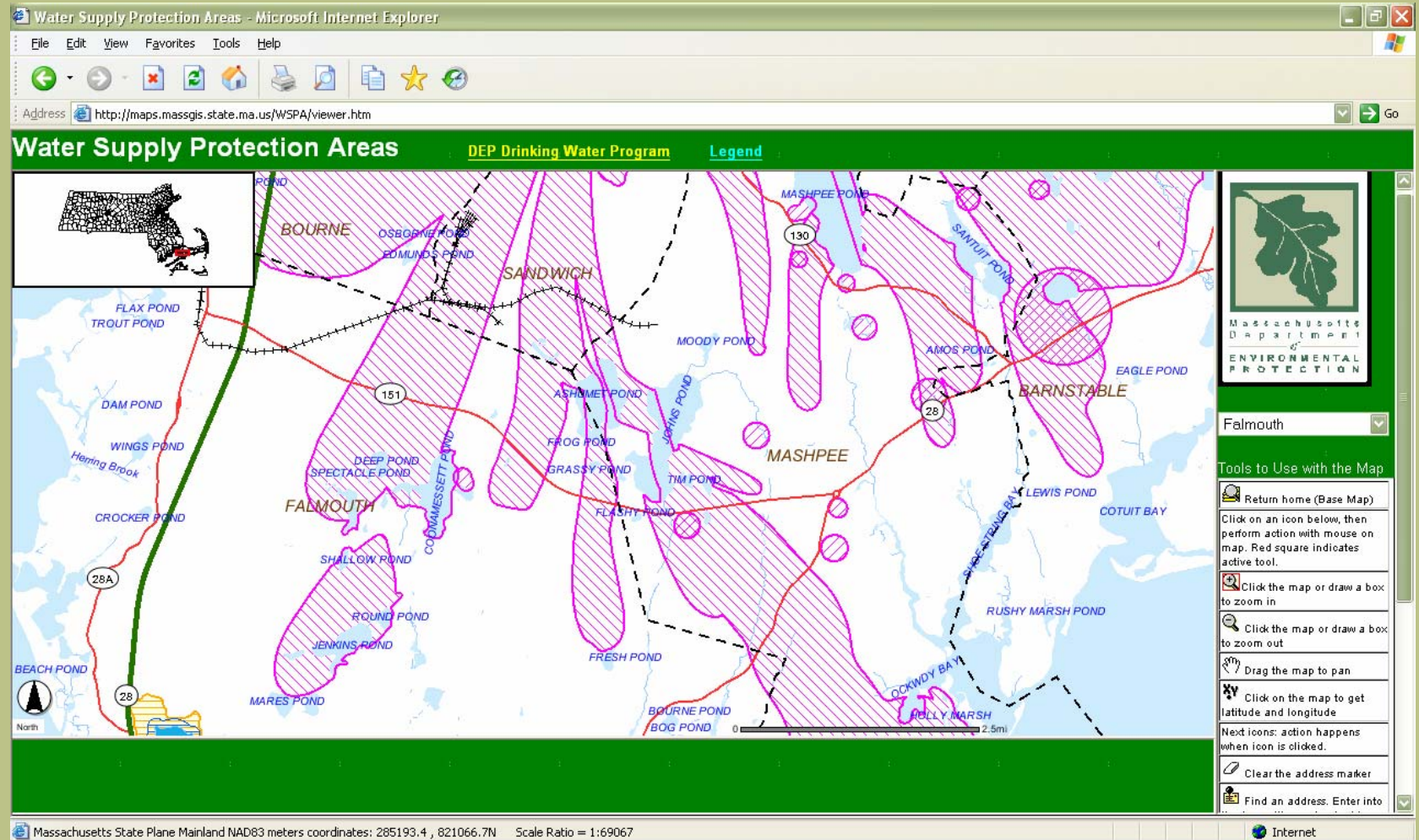
Done Internet







# MassGIS Online Mapping Tool





# Are You Subject to the Regulations?

Step 1: Determine if your cranberry bog is  
in a Zone II area

Step 2: Check the cranberry pesticides on  
the groundwater protection list





## Cranberry compounds on the Groundwater Protection List

- Chlorothalonil – Bravo, Echo, Equus
- Pronamide – Kerb (Section 18 needed!)
- Thiamethoxam - Actara
- Methoxyfenozide – Intrepid
- Simazine – Princep, Caliber





# CHLOROTHALONIL

## **BRAVO, ECHO, EQUUS, CHLOROTHALONIL 720**

You cannot use Chlorothalonil products in a Zone II area unless you can document that you have **tried alternatives** in the past, at this same location and they **failed**.







# PRONAMIDE

## KERB

You cannot use Kerb in a Zone II area unless you can document that you have tried **Casoron** in the past at this same location and it failed.

Verify that **Section 18** has been approved prior to use!





# THIAMETHOXAM

## ACTARA

Actara is the **only viable alternative** for managing resistant cranberry weevil and **is allowed** in a Zone II area.





# METHOXYFENOZIDE

## INTREPID

This compound **CANNOT** be used in Zone II areas.

There are available alternatives.





# SIMAZINE

## CALIBER, PRINCEP

This compound **CANNOT** be used in Zone II areas.

There are available alternatives.







# Are You Subject to the Regulations?

Step 1: Determine if your cranberry bog is in a Zone II area

Step 2: Check the cranberry pesticides on the groundwater protection list

Step 3: Requirements for existing producing cranberry bogs





# Requirements for Producing Bogs

- >50% foliar coverage
- No viable alternatives for the pesticide
- IPM plan from MDAR approved sources
  - 2007 Cranberry Chart Book
  - UMASS Extension IPM fact sheets
- IPM program specific to GP regs
- Documentation that past alternatives failed





# IPM Records

- The name of the applicator
- Location (IWPA, Zone II and property) and dates of application
- A problem statement which outlines the reason for using the pesticide product on the Groundwater Protection List
- An account of the method used by the applicator to identify the problem (i.e. IPM scouting records or fruit rot records from prior harvest)
- An account of the IPM measures that have been taken to manage the problem (i.e. late water, sanding, etc.)
- UMass Cranberry Station Chart Book





# Requirements for New Plantings

*For a pesticide product which is soil applied or applied to an area with less than 50% foliar ground cover*

- There is no viable alternative for the use of the pesticides on the Groundwater Protection List
- A Pesticide Management Plan (PMP) for that use pattern has been approved by the MDAR. A PMP is developed specifically for new plantings in a Zone II area.
- The MDAR, DEP and the Department of Public Health will review the plan





# Pesticide Management Plan

- Name and EPA registration number of pesticide used
- All maps necessary to identify the anticipated use site
- Written evaluations of alternative control methods including economic ramifications
- Information on the target pest, method of application, rate of application, irrigation practices (if any), crop and the percent of ground cover
- Storage, handling and loading procedures







# Pesticide Management Plan

- The specific department approved IPM program that has been adopted
- Site specific data – top soil horizon depth; depth to seasonal high water table; NRCS soils hydrologic group; percent organic matter soil test results; monitoring data from wells on site including a list of wells
- Other data which supports a finding that the anticipated use site is not a highly vulnerable site
- All data must be referenced





# PMP Approval Process

- The MDAR, DEP and the Department of Public Health will review the plan
- MDAR must respond within 60 days

## **Criteria:**

- The anticipated use site is not a highly vulnerable site
- There is unlikely to be an unreasonable adverse effect on the environment
- There is no viable alternative control method
- The product has not been detected as a result of a groundwater monitoring program





# Are You Subject to the Regulations?

Step 1: Determine if your cranberry bog is in a Zone II area

Step 2: Check the cranberry pesticides on the groundwater protection list

Step 3: Requirements for existing producing cranberry bogs

Step 4: Requirements for new plantings

Step 5: Submission form requirements





# Submission Form Requirements

- MDAR must be notified of any applications of a product on the Groundwater Protection List **within 10 days of the end of each month.**
- Include all applications made during that month
- Do not include chemicals that are not on Groundwater Protection List
- May use one form to report multiple applications that occurred in the same month





# Submission Form Requirements

- MDAR Web Site  
([www.mass.gov/agr/pesticides/water/cranberry/advisory.htm](http://www.mass.gov/agr/pesticides/water/cranberry/advisory.htm))
- CCCGA Web Site  
([www.cranberries.org/grower/forms](http://www.cranberries.org/grower/forms))
- CCCGA Grower Advisory







# Submission Form History from MDAR

- 34 growers reporting for 2006
- 43 growers reporting for 2005
- 21% Decline
- Regulator Quote: "...It Does Seem Low"





# Thank You!

